



State of Montana
Montana Department of Transportation

2012 Agency Biennial IT Report
Fiscal Year 2011-2012

August 2012

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EXECUTIVE SUMMARY

The mission of the Information Services Division is to provide the technology products and enabling services to allow MDT to effectively and efficiently deliver a quality transportation system. Although not all the objectives were addressed in this reporting period, MDT ISD has made significant progress on most of its objectives.

Among the accomplishments in which we are particularly proud includes our successful migration of our computer infrastructure into the new State of Montana Data Center, our continued commitment to providing excellent customer service to our end-users throughout the state, delivering several successfully developed applications to meet the business needs of MDT, completing our commitment to get all MDT facilities throughout the state off of dial-up connections and onto high-speed network connections, and continuing our commitment to implementing IT best practices into our daily operations.

Finally, we are very pleased with the progress made on the three initiatives reflected in Section 2 of this report. The upgrade of our Equipment Vehicle Management System, the many projects associated with our ECVISN funding, and the overhaul of the Safety Information Management System are all on track to help further the effectiveness and efficiency of program delivery within the Montana Department of Transportation.

Initiative Status	Total	Fully Funded	Unfunded	Partially Funded
Completed				
Substantially Completed				
Deferred				
Delayed				
Cancelled				
Remain on-going by design	3	3		

SECTION 1: AGENCY IT PLAN ACCOMPLISHMENTS – GOALS & OBJECTIVES

Goal Number 1:

IT Goal 1 Maintain MDT's computing resources and environment

Description: The Montana Department of Transportation's Information Services Division has a significant, long-term investment in its computer resources and environment. These resources include everything from personal computers located on employee desktops to the wiring and network hardware located behind the scenes. In addition to more than 2000 employees depending on a reliable MDT computer environment to perform their daily tasks, a significant dependency also exists on the part of federal agencies, other state agencies, the transportation contracting community, and the traveling public. The Information Services Division recognizes the vital role our computing resources and environment play in helping deliver the transportation program to the citizens of Montana and we are committed to maintaining these resources at peak performance and availability.

Benefits: The benefits realized are well maintained computing resources and environment. The beneficiaries include MDT personnel, as well as MDT's external customers.

Which state strategic goal(s) and/or objective(s) does your goal address? This goal supports the State's IT goals 1, 2, 3, and 4.

Supporting Objective/Action

Objective 1-1 Provide end-user hardware and software support, maintenance, replacement, and management services on an on-going basis

Accomplishments: MDT ISD engaged in two significant hardware replacements, repaired end-user hardware as necessary, and began to migrate to the Windows 7 operating system.

Status: On-going

Supporting Objective/Action

Objective 1-2 Provide infrastructure hardware and software support, maintenance, replacement, and management services on an on-going basis

Accomplishments: MDT ISD fully migrated our server and related infrastructure to the State of Montana Data Center (SMDC). The division also engaged in several software and hardware replacement projects.

Status: On-going

Goal Number 2:

IT Goal 2 Maintain existing application systems

Description: The Montana Department of Transportation's Information Services Division has a significant investment in computer applications. These applications are an integral part of every business function throughout the agency. The Information Services Division recognizes the vital role our computer applications serve in helping deliver the transportation program to the citizens of Montana and we are committed to maintaining these applications throughout their lifecycle.

Benefits: The benefits realized are well maintained and reliable computer applications. The beneficiaries include MDT personnel throughout the agency, as well as MDT's external customers.

Which state strategic goal(s) and/or objective(s) does your goal address? This goal supports the State's IT goals 1, 2, and 4.

Supporting Objective/Action

Objective 2-1 Provide applications software support, maintenance, replacement, and management services on an on-going basis

Accomplishments: MDT ISD routinely engaged in maintaining and supporting existing application assets deployed throughout the agency.

Status: On-going

Supporting Objective/Action

Objective 2-2 Provide direction for improvements or alterations to the existing application portfolio

Accomplishments: MDT ISD worked with business entities from throughout the agency to update and improve a variety of existing applications.

Status: On-going

Goal Number 3:

IT Goal 3 Create new and enhanced applications to meet the business needs of MDT

Description: Information technology is an integral component of almost every business process conducted within the Montana Department of Transportation. These business processes are ever changing and the associated technology also needs to change to allow these processes to be the most efficient possible. ISD is committed to creating new and enhanced applications in a timely manner to meet the ever changing business needs of MDT.

Benefits: The benefits realized are new computer applications, as well as enhanced computer applications. The beneficiaries include MDT personnel, as well as MDT's external customers.

Which state strategic goal(s) and/or objective(s) does your goal address? This goal supports the State's IT goals 1 and 2.

Supporting Objective/Action

Objective 3-1 Ensure that an Agency focus on priority is provided for large scale development efforts that require extensive IT resources

Accomplishments: MDT ISD has undertaken a Portfolio Management project to address this issue which includes an investment selection decision making process.

Status: On-going

Supporting Objective/Action

Objective 3-2 Implement Application Development Governance

Accomplishments: MDT ISD has undertaken a Portfolio Management project to address this issue which includes an investment selection decision making process.

Status: Delayed

Supporting Objective/Action

Objective 3-3 Implement the MDT GIS Strategic Plan

Accomplishments: No substantial progress was made towards this objective

Status: Delayed

Supporting Objective/Action

Objective 3-4 Ensure that appropriate technologies are applied to new or extensively changed systems

Accomplishments: All application development and improvement efforts ensured appropriate technologies were applied.

Status: On-going

Supporting Objective/Action

Objective 3-5 Provide support for the Applications Bureau technology direction

Accomplishments: MDT ISD has engaged in substantial research to establish the technology future for MDT.

Status: On-going

Goal Number 4:

IT Goal 4 Provide customer support for all ISD services

Description: The Information Services Division is first and foremost a service organization. Our mission is to provide quality IT products and services the Montana Department of Transportation requires to deliver the transportation program to the citizens of Montana. As a result, we take our customer support obligation seriously and strive to continually provide the best support possible.

Benefits: The benefits realized are well supported services. The beneficiaries include MDT personnel throughout the agency.

Which state strategic goal(s) and/or objective(s) does your goal address? This goal supports the State's IT goals 1 and 2.

Supporting Objective/Action

Objective 4-1 Evaluate and implement Service Level Management strategies

Accomplishments: No substantial progress was made towards this objective

Status: Delayed

Supporting Objective/Action

Objective 4-2 Provide computer training opportunities for MDT personnel

Accomplishments: Several computer training opportunities were provided to all MDT personnel with significant participation

Status: On-going

Supporting Objective/Action

Objective 4-3 Evaluate and improve ISD's customer interfaces

Accomplishments: No substantial progress was made towards this objective

Status: Delayed

Supporting Objective/Action

Objective 4-4 Continually assess ISD services

Accomplishments: MDT ISD has continued to engage its customers through an annual survey. In addition, customers from throughout the agency have participated in ISD's strategic planning efforts.

Status: Delayed

Goal Number 5:

IT Goal 5 Manage ISD's Fiscal Resources

Description: The Information Services Division has two important obligations: To manage our fiscal resources in the most prudent manner possible and to nurture and provide for our most important resource – our employees. ISD is committed to these obligations and continually strives to manage our resources in the best manner possible.

Benefits: The benefits realized include a well-planned budget that enables ISD and the agency to understand where our fiscal resources will be utilized. Further, the benefits include a well-managed workforce that allows us to successfully deliver MDT's IT program. The beneficiaries include MDT's senior management, MDT personnel, ISD workforce, and MDT's external customers.

Which state strategic goal(s) and/or objective(s) does your goal address? This goal supports the State's IT goals 1, 2, and 3.

Supporting Objective/Action

Objective 5-1 Continually assess and manage ISD's financial resources

Accomplishments: MDT ISD remained fully engaged in all financial matters impacting operations

Status: On-going

Goal Number 6:

IT Goal 6 Manage ISD's Human Resources

Description: The Information Services Division has two important obligations: To manage our fiscal resources in the most prudent manner possible and to nurture and provide for our most important resource – our employees. ISD is committed to these obligations and continually strives to manage our resources in the best manner possible.

Benefits: The benefits realized include a well-planned budget that enables ISD and the agency to understand where our fiscal resources will be utilized. Further, the benefits include a well-managed workforce that allows us to successfully deliver MDT's IT program. The beneficiaries include MDT's senior management, MDT personnel, ISD workforce, and MDT's external customers.

Which state strategic goal(s) and/or objective(s) does your goal address? This goal supports the State's IT goal 1.

Supporting Objective/Action

Objective 6-1 Continually assess and implement ISD's workforce development strategies

Accomplishments: MDT ISD has actively assessed the workforce development needs of the division and has developed a number of specific strategic objectives for addressing these needs.

Status: Delayed

Supporting Objective/Action

Objective 6-2 Continually assess and improve Bureau to Bureau, Section to Section, and within section communications for ISD

Accomplishments: No substantial progress was made towards this objective

Status: Delayed

Goal Number 7:

IT Goal 7 Maintain and implement strategic and tactical IT plans

Description: Maintaining and implementing strategic and tactical plans is an important component to the business of the Information Services Division. These plans serve as the basis for all ISD activities, whether it is budget development, workforce development, employee performance management, or simply day-to-day activities undertaken by staff. ISD is committed to constantly evaluating our direction to ensure the best possible products and services are delivered in a timely manner to the Montana Department of Transportation.

Benefits: The benefits realized include the development of an appropriate IT strategic plan for MDT, as well as a deliverable tactical UT plan for the agency. The beneficiaries include ISD personnel, as well as all MDT personnel who rely on ISD for IT services.

Which state strategic goal(s) and/or objective(s) does your goal address? This goal supports the State's IT goal 1.

Supporting Objective/Action

Objective 7-1 Develop and maintain an IS strategic plan for the Agency

Accomplishments: MDT ISD engaged in a significant initiative to update and implement their strategic planning efforts. The result was a substantially improved methodology and strategic plan.

Status: On-going

Supporting Objective/Action

Objective 7-2 Develop and maintain a tactical plan for ISD

Accomplishments: MDT ISD engaged in a significant initiative to update and implement their strategic planning efforts. The result was a substantially improved methodology and tactical plan.

Status: On-going

Supporting Objective/Action

Objective 7-3 Develop and maintain the biennial agency IT plan required under MITA

Accomplishments: MDT ISD developed, submitted, and maintained the agency IT plan according to the requirements of MITA.

Status: On-going

Goal Number 8:

IT Goal 8 Evaluate and document all ISD processes, procedures, and policies

Description: Well-reasoned and thoroughly documented processes, procedures, and policies are the foundation of a successful and mature organization. The Information Services Division recognizes this fact and is committed to continually evaluating, developing, updating, and documenting the many processes, procedures, and policies fundamental to our business.

Benefits: The benefits realized are processes and procedures which are well documented and continually evaluated for their appropriateness. The beneficiaries include ISD staff, as well as personnel throughout MDT who rely on ISD's processes and procedures.

Which state strategic goal(s) and/or objective(s) does your goal address? This goal supports the State's IT goals 1, 3, and 4.

Supporting Objective/Action

Objective 8-1 Continually assess and improve ISD processes

Accomplishments: MDT ISD engaged in several process improvement initiatives to improve our internal processes.

Status: On-going

Supporting Objective/Action

Objective 8-2 Continually assess and improve MDT IT policies

Accomplishments: MDT IT policies were routinely assessed and improved as needed.

Status: On-going

Supporting Objective/Action

Objective 8-3 Employ Project/Program Management best practices to ensure timely and cost effective delivery

Accomplishments: MDT ISD has actively engaged in the assessment of our existing project management processes and are actively developing and documenting improvements to those processes.

Status: On-going

Goal Number 9:

IT Goal 9 Manage all ISD-based programs

Description: The Information Services Division is responsible for the management of a variety of programs essential to the success of MDT. We take this management responsibility seriously and strive to make each of these programs successful.

Benefits: The benefits realized are well managed IT-based programs within MDT. The beneficiaries of this goal are all MDT personnel who rely on these IT-based programs.

Which state strategic goal(s) and/or objective(s) does your goal address? This goal supports the State's IT goals 1 and 4.

Supporting Objective/Action

Objective 9-1 Manage the Records Program

Accomplishments: MDT ISD continues to actively manage the complete life-cycle of MDT's Records Program.

Status: On-going

Supporting Objective/Action

Objective 9-2 Provide program/project management to federally funded, large scale, cross-division and cross-agency projects

Accomplishments: MDT ISD continues to employ project management best practices on all large-scale projects.

Status: On-going

Supporting Objective/Action

Objective 9-3 Manage the Duplicating Services program

Accomplishments: MDT ISD continues to employ best management practices in the duplicating services operations.

Status: On-going

Supporting Objective/Action

Objective 9-4 Identify business case and high level plan for architecture decision making process

Accomplishments: No significant progress has been made towards this objective

Status: Cancelled

Supporting Objective/Action

Objective 9-5 Update the "Montana Regional Architecture" to ensure accuracy of the documentation of MDT's Intelligent Transportation System (ITS)

Accomplishments: The Montana Regional Architecture documentation has been fully updated.

Status: Complete

Goal Number 10:

IT Goal 10 Evaluate, maintain, and improve ISD's business relationships

Description: The Information Services Division maintains many business relationships vital to the success of MDT. These relationships include other divisions within MDT, other state agencies, the federal government, and MDT customers. It is imperative to the success of ISD to continually evaluate, maintain, and improve these relations.

Benefits: The benefits realized include better business relationships with ISD's business partners. The beneficiaries include ISD, as well as ISD's business partners.

Which state strategic goal(s) and/or objective(s) does your goal address? This goal supports the State's IT goals 1 and 2.

Supporting Objective/Action

Objective 10-1 Participate in Enterprise-based committees (i.e. Network and State Data Center; security; procurement, architecture)

Accomplishments: MDT fully participated in all enterprise based committees.

Status: On-going

Supporting Objective/Action

Objective 10-2 Continually evaluate ISD's relationship with ITSD's customer service, financial, networking and administrative areas of shared responsibilities and recommend change where and when identified

Accomplishments: MDT ISD continues to engage with all aspects of ITSD's operations

Status: On-going

Supporting Objective/Action

Objective 10-3 Assess and identify opportunities for improvements to the state-wide GIS framework

Accomplishments: MDT remains engaged in the GIS Managers Forums and provides input at all opportunities.

Status: On-going

Supporting Objective/Action

Objective 10-4 Work with Maintenance Division representatives and ITSD to define Agency COOP plan ensuring ISD portions of the plan are addressed – including but not limited to Business Impact Analysis of systems, Disaster Recovery planning (both recovery and restoration)

Accomplishments: MDT ISD is actively engaged in the development of its business continuity plan.

Status: On-going

Supporting Objective/Action

Objective 10-5 Establish MDT Enterprise Architecture relationships with other Agencies within the State Enterprise

Accomplishments: No significant progress has been made towards this objective

Status: Delayed

Goal Number 11:

IT Goal 11 Evaluate new technologies and practices to meet future IT requirements

Description: Technology is at the core of virtually everything managed by the Information Services Division. These technologies are ever changing and improving and it is imperative our division is continually evaluating these new technologies and practices in order to provide the best products and services available for MDT. ISD is committed to staying current with technological changes to ensure Montana's transportation program is as efficient and effective as possible.

Benefits: The benefits realized include the identification of the newest IT technologies and practices available. The beneficiaries include ISD, as well as all MDT employees who rely on IT to perform their business functions.-

Which state strategic goal(s) and/or objective(s) does your goal address? This goal supports the State's IT goals 1, 2, and 4.

Supporting Objective/Action

Objective 11-1 Continually assess new products to meet the needs of MDT

Accomplishments: MDT ISD has assessed a variety of new IT products.

Status: On-going

Supporting Objective/Action

Objective 11-2 Continually assess and revise the enterprise view of MDT systems and interrelationships of system data across the Agency and the State

Accomplishments: No significant progress has been made towards this objective

Status: Delayed

Supporting Objective/Action

Objective 11-3 Maintain Program and Project Management best practices consistent with PMBOK and the State Program Management Office guidelines

Accomplishments: MDT ISD continues to assess and improve our PM practices consistent with the State PMO guidelines.

Status: On-going

SECTION 2: IT INITIATIVES STATUS UPDATES

Initiative 1 Web based Equipment Vehicle Management System (EVMS)

Description: Currently EVMS is a server dependent Oracle base system. Software maintenance is a time consuming process on a server based system. Updates are required to be sent to individual computers where EVMS software has been loaded. This involves tracking each individual computer and ensuring that the computer still belongs to individuals using EVMS. In addition, computers in remote areas do not always receive updates due to poor connectivity. Also if the computers are not left on to receive updates a second load is required. This becomes a fairly time consuming process to ensure all computers have been updated as needed.

A web based system would create one location and one access point for the entire program, allowing any user to access EVMS for any computer alleviating the need to have it individually installed. It would also provide easy accessibility to management information and data as well as allow greater flexibility and less support. A web based EVMS would keep the system current with technology and allow uniform integration with other management and financial systems such as the Maintenance Management System (MMS), the Pavement Management System (PMS), and Statewide Accounting, Budgeting, and Human Resource Systems (SABHRS) as they move toward web based programming.

EPP Number: NP-704 and NP-802

Status: On-going

Funding: Funded

Initiative 2 UCR ECVISN Budget Authority

Description: Every year through the Unified Carrier Registration (UCR) program, Montana collects fees from Montana and Alberta Motor Carriers, Brokers, Freight Forwarders and Shippers. These revenues are required by SAFETEA-LU (Federal transportation law) to be used for commercial vehicle safety purposes and administered through the state's Motor Carrier Safety Assistance Program (MCSAP). By federal law, Montana is capped at \$1,049,063 of UCR funds, and it is anticipated that this amount will be received each year. Amounts requested above the cap represent cash balances already on hand not expended in the base.

Using ECVISN federal funds and UCR state matching funds, MDT plans to deploy commercial motor vehicle related technology projects. ECVISN grants are 50% federally funded and 50% State funded. Under federal law, regulations and policy, UCR funds may be used as a State match. This proposal is to obtain spending authority for state UCR funds and Federal spending authority to fund three ECVISN projects. The requested combined authority is \$2,050,906 (\$1,025,453 ECVISN and \$1,025,453 UCR) for SFY 2012 and \$981,616 (\$490,808 ECVISN and \$490,808 UCR) in SFY 2013 to deploy these projects. In addition, MDT is requesting state spending authority for UCR funds of \$127,000 in SFY 2012 and \$152,000 in SFY 2013 to maintain the ECVISN deployments.. The two projects in SFY 2012 are automated payment capability for the IFTA (International Fuel Tax Agreement) and IRP (International Registration Plan) systems and weigh station automated vehicle screening at two existing weigh stations. The SFY 2013 project is virtual weigh station automated screening at an existing weigh in motion site.

EPP Number: PL-2201

Status: On-going

Funding: Funded

Initiative 3 Safety Information Management System (SIMS)

Description: Develop and Implement a Safety Information Management System using contracted IT services. The analysis of a 2009 SMIS feasibility study confirmed MDT pursue replacing its current Safety Management System by detailing requirements for a new SIMS application and construct a request for proposal process which allows vendors to propose either a transfer of an existing SMIS system, implementing a commercial off the shelf solution, or building a custom solution.

The SIMS initiative will address the following issues facing MDT:

1. The implementation of The CTS America Public Safety System by the Montana Highway Patrol in the fall of 2008 and the pending retirement of their previous system, the Montana Accident Reporting System (MARS), has created data architecture and data consistency issues for MDT. MARS has provided the current SMS with the raw crash data for analysis and reporting. Thus, the SMS application needs to be re-architected to accept the CTS America Public Safety System database structure which is not the same as MARS.
2. Adoption and application of the 2008 Model Minimum Uniform Crash Criteria (MMUCC), a major revision to the nationally-accepted crash investigation and reporting guideline. The third edition of MMUCC was published during the summer of 2008, and is a voluntary guideline for collecting consistent, reliable crash data that are more effective for identifying traffic safety problems, establishing goals and performance measures, monitoring the progress of programs, and allocating resources for enforcement, engineering and education. The use of the MMUCC will absolutely require the current SMS to evolve to meet the needs of its customers.
3. Adoption, in whole or in part, the new National Highway Traffic Safety Administration (NHTSA) roadway inventory guideline known as the Model Minimum Inventory of Roadway Elements (MMIRE) and provide a system which can support the storage of this enhanced roadway inventory information as it is collected and available for use in analysis. The data model of the current SMS application does not support this guideline.
4. Appropriate accessibility to data from Montana Court System for traffic safety related case disposition data. This classification of data has not been available to MDT in the past and will enhance analysis and reporting on traffic safety related citations. The current SMS was not designed with court data availability and lacks the database structure or functional capabilities to accept, store and display this information.
5. The last update to the current SMS was in the mid-1990s. The system, while functionally robust is difficult to use, especially for new users of the application. As a result, stakeholders are requesting a new system which utilizes more current technology and is more user-friendly.

Integration of other enabling technologies support enhanced safety information analysis. This includes automated collision diagrams, improved data displays, and web-based services. Internal and external stakeholders are requesting the ability to utilize GPS data, aerial photography, digital as-built plans, GIS applications, and enhanced linear referencing. There is limited return on investment to include these enhancements within the architecture of the current SMS application.

EPP Number: N/A

Status: On-going

Funding: Funded

SECTION 3: ADDITIONAL INFORMATION - OPTIONAL

Other types of information that your agency may wish to report as accomplishments or challenges related to achieving the Goals, Objectives, and Initiatives outlined in your 2010 IT plan and 2011 IT plan update.